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EXAMINER

COLAN, GIOVANNA B

ART UNIT

PAPER NUMBER

2162

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/758,061	Applicant(s) MOORE, JOHN A.	
	Examiner Giovanna Colan	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is issued in response to the Amendment filed on 09/05/2006.
2. Claims 1, 3 – 10, 12 – 15, and 19 – 20 were amended. Claims 2, 11, and 16 were canceled. No claims were added.
3. This action is made Final.
4. Claims 1, 3 – 10, 12 – 15, and 17 – 20 are pending in this application.
5. Applicant's arguments with respect to claims 1, 3 – 10, 12 – 15, and 19 – 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

6. Claim 1 is objected because of the following informalities:

Claim 1 recites the limitation "identifying ..." and "comparing ..." in the same line. According to MPEP, where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation, 37 CFR 1.75(i).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 5 – 10, 12 – 15, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001) in view of Hill (US Patent No. 7,020,658 B1, filed June 4, 2001).**

Regarding Claim 1, Toda discloses a method for managing image files in a host system comprising:

identifying an image file stored in secondary storage for a host system (Page 8, [0135], lines 5 – 10, Toda); comparing file metadata for the identified image file to a downgrade threshold (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, Toda);

downgrading the identified image file (Page 8, [0135], lines 1 – 5, Toda) in response to the comparison of the file metadata to the downgrade threshold (Page 6, [0096], lines 7 – 9, ... if the sum total is equal to or larger than threshold value m, the parameter "1/2" may be selected ..., Toda);

storing the downgraded file in secondary storage (Page 9, [0142], lines 1 – 3, loaded onto the RAM, Toda); and

storing the identified image file in tertiary storage (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10, external storage device, Toda),

Toda discloses all the limitations as discussed above. However, Toda is silent with respect to: an access time. On the other hand, Hill discloses: tertiary storage having an access time that is greater than the access time for the secondary storage (Fig. 2C, Last Accessed, and Site Freq, Col. 9, lines 45 – 53, Hill).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Hill's teachings to the system Toda. Skilled artisan would have been motivated to do so, as suggested by Hill (Col. 3, and 4, lines 58 – 61 and 1 – 3; respectively, Hill), to determine an access frequency associated with one of the data files and modify the list of network addresses based on the access frequency of the data file; and to determine an access time associated with the computer accessing storage area, and further configured to delete data files in the storage area if the access time exceeds a threshold value. In addition, both of the references (Toda and Hill) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, identifying image files in storages. This close relation between both of the references highly suggests an expectation of success.

Regarding Claim 5, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

reducing resolution of the identified image file to generate the downgraded file (Page 1, [0006], lines 14 – 19, ... resolution conversion means for generating reduced non-text multi-valued image data by lowering a resolution of the non-text multivalued image data ..., Toda).

Regarding Claim 6, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

reducing pixel size in the identified image file to generate the downgraded file (Page 4, [0063], lines 6 – 9, ... black pixels corresponding to change portions from background to characters ... by a scanner are reduced to generate a new binary image “newbi” ...,Toda).

Regarding Claim 7, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

converting a color image from one color format to another color format that requires less data to represent color in the identified image file to generate the downgraded file (Page 9, [0150], lines 2 – 5, ... color data may be converted from an RGB format into an LAB or YcrCb format ..., Toda).

Regarding Claim 8, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

converting a color image to a color palette version of the color image to generate the downgraded file (Page 1, [0007], lines 10 – 17, ... color palette generation means for generating at least one color palette as the representative color data ..., Toda).

Regarding Claim 9, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

combining a plurality of downgrade operations to reduce the size of the identified image file to generate the downgraded file (Page 8, [0135], lines 3 – 5, image compression process using programs, Toda).

Regarding Claim 10, the combination of Toda in view of Hill discloses a method, the downgrading of the identified image file further comprising:

retrieving a full resolution version of the identified image file from tertiary storage (Fig. 1, items 100, 104, and 105, Page 3, [0049], lines 15 – 16, Toda¹); and

performing a downgrade operation on the full resolution version of the identified image file to generate the downgraded file (Fig. 1, items 105, and 106, Page 3, [0049] and [0053], lines 15 – 16 and 1 – 3, lower its resolution; respectively, Toda).

¹ Wherein the image A (before reduction) corresponds to the full resolution version of the identified image file claimed.

Regarding Claim 12, the combination of Toda in view of Hill discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a file access frequency threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Col. 3, lines 58 – 61, Hill).

Regarding Claim 13, the combination of Toda in view of Hill discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a last access time threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Fig. 2c, Col. 10, lines 27 – 31, Hill).

Regarding Claim 14, the combination of Toda in view of Hill discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a classification threshold (Page 5, [0087] and [0089], lines 8 – 10 and 11 – 16; respectively, Toda²).

Regarding Claim 15, the combination of Toda in view of Hill discloses a system for managing image files in a host system comprising:

² Wherein the step which binarizes a pixel to black or to white if the absolute value exceeds or not a threshold value corresponds to the step of comparing as claimed; and the threshold value corresponds to the classification threshold as claimed.

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a file data volume for storing file metadata (Page 3, and 9, [0056], and [0142], lines 1 – 5, and 12 – 14; respectively, Toda) that corresponds to image file stored in a secondary storage for a host system (Page 8, [0135], lines 5 – 10, Toda);

a file selector for retrieving file metadata from the file data volume (Page 5, [0087], lines 1 – 8, Toda) and comparing the retrieved metadata to at least one downgrade.threshold to identify an image file stored in the secondary storage for downgrading (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, Toda); and

a file reducer for downgrading the identified image file (Page 8, [0135], lines 5 – 7, image compression process, Toda); and

a file controller for generating file metadata for storage in the file data volume (Page 5, [0087], lines 1 – 8, Toda) and for storing the downgraded file in secondary storage (Page 9, [0142], lines 1 – 3, loaded onto the RAM, Toda) and for storing the identified image file in tertiary storage (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10, external storage device, Toda).

Regarding Claim 17, the combination of Toda in view of Hill discloses a system wherein the file reducer includes a compressor for compressing the identified image file (Page 3, [0049], lines 17 – 19, compression unit, Toda).

Regarding Claim 18, the combination of Toda in view of Hill discloses a system wherein the file reducer includes a color reducer for converting a color image from one color format to another color format that uses less data to represent color (Page 3, and 9, [0049] and [0150], lines 15 – 19 and 2 – 5; respectively, reduction unit, Toda).

Regarding Claim 19, the combination of Toda in view of Hill discloses a system wherein the file reducer includes an image resolution reducer for reducing resolution of the identified image file (Page 6, [0093], lines 1 – 6, Toda).

Regarding Claim 20, the combination of Toda in view of Hill discloses a system wherein the file reducer includes a pixel size reducer for reducing a number of bits to represent a pixel in the identified image file (Page 6, [0103], and [0106], lines 1 – 3 and 3 – 6, color reducer; respectively, Toda).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001), in view of Hill (US Patent No. 7,020,658 B1, filed June 4, 2001), and further in view of Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993).

Regarding Claim 3, the combination of Toda in view of Hill discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of Hill is silent with respect to lossless compression. On the other hand, Gleicher discloses a system and method that performs a lossless compression on the identified image file (Col. 4, lines 52 – 57, Gleicher). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Gleicher's teachings to the system of the combination of Toda in view of Hill. Skilled artisan would have been motivated to do so, as suggested by Gleicher (Col. 4, lines 52 – 57, Gleicher), to provide a method such that original image can be reconstructed exactly, with no loss of information, on the same computer that compressed it or on a smaller scientific or engineering workstation. In addition, the applied references (Toda, Hill, and Gleicher) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001), in view of Hill (US Patent No. 7,020,658 B1, filed June 4, 2001), and further in view of Bryniarski et al. (Bryniarski hereinafter) (US Patent No. 5,974,182, issued: October 26, 1999).

Regarding Claim 4, the combination of Toda in view of Hill discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of Hill is silent with respect to lossy compression. On the other hand, Bryniarski discloses a system and method that performs a lossy compression on the identified image file (Col. 2, lines 62 – 65, Bryniarski). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Bryniarski's teachings to the system the combination of Toda in view of Hill. Skilled artisan would have been motivated to do so, as suggested by Bryniarski (Col. 1, lines 29 – 32, Bryniarski), to provide a higher compression rate without visible degradation in an image, by taken advantage of the human visual system threshold. In addition, the applied references (Toda, Hill, and Bryniarski) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

Response to Arguments

1. Applicant argues that the prior art fails to disclose; "managing secondary and tertiary memory in a host system."

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (managing secondary and tertiary memory in a host system) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Additionally, the recitation "managing ..." has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble

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for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

2. Applicant argues that the prior art fails to disclose; "a system that differentiates between the types of memory space available in its system based upon the access time of the various memory spaces."

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (a system that differentiates between the types of memory space available in its system based upon the access time of the various memory spaces) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, the combination of Toda in view of Hill does disclose the amended claimed limitation including: access time (See 103 rejection of Claim 1, and 15 discussed in this Office Action above).

3. Applicant argues that the prior art fails to disclose; "compress an image file for storage in one type of memory space while also retaining a different version of the document in another type of memory space."

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (**storage in one type of memory space while also retaining a different version of the document in another type of memory space**) is not recited in the rejected

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claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, the combination of Toda in view of Hill does disclose the claimed limitation including: compressing the identified image file (Page 3, [0049], lines 17 – 19, compression unit, Toda).

4. Applicant argues that the prior art fails to disclose; “examine the file metadata for an image file.”

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (**examine** the file metadata for an image file) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

5. Applicant argues that the prior art fails to disclose; “that file metadata for an identified image file be compared to a downgrade threshold.”

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose: that file metadata for an identified image file be compared to a downgrade threshold (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, wherein the number of areas with large coefficients of high-frequencies portions correspond to the metadata claimed; Toda).

6. Applicant argues that the prior art fails to disclose; “make a decision to compress an image file in response to such a comparison.”

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (**make a decision to compress** an image file in response to such a comparison) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, the combination of Toda in view of Hill does disclose the claimed limitation including: compressing the identified image file in response to such comparison (Page 3, and 6, [0049], and [0096], lines 17 – 19, and 7 – 9, compression unit, “... **if the sum total is equal to or larger than threshold value m, the parameter “1/2” may be selected ...**”; respectively, Toda).

7. Applicant argues that the prior art fails to disclose; “the selection of an image file for compression”, and “the location for storage of that compressed image”.

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (“**the selection of an image file** for compression”; and “the location for storage of that compressed image”) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, the combination of Toda in view of Hill does disclose the amended claimed

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limitation including: a file selector for retrieving file metadata from the file data volume and comparing the retrieved metadata to at least one downgrade threshold to identify an image file stored in the secondary storage for downgrading (See 103 rejection of Claim 15 discussed in this Office Action above).

8. Applicant argues that the prior art fails to disclose; "that both the original image and the compressed image are stored in different types of memory within the same system."

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies (that both **the original image** and the compressed image **are stored in different types of memory within the same system**) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

9. Applicant argues that the prior art fails to disclose; "storing the downgraded file in secondary storage while also storing the identified image file in a tertiary storage."

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose the amended limitation of: storing the downgraded file in secondary storage; storing the identified image file in a tertiary storage (See 103 rejection of Claim 1, and 15 discussed in this Office Action above).

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10. Applicant argues that the prior art fails to disclose; "that the resolution of the entire image file is reduced."

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose that the resolution of the entire image file is reduced (Page 1, [0006], lines 14 – 19, ... resolution conversion means for generating reduced non-text multi-valued image data by **lowering a resolution of the non-text multivalued image data** ..., Toda).

11. Applicant argues that the prior art fails to disclose; "that the bit size of the pixel in the image file is reduced."

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose the amended limitation of: reducing pixel size in the identified image file to generate the downgraded file (See 103 rejection of Claim 6 discussed in this Office Action above).

12. Applicant argues that the prior art fails to disclose; "that format conversion of a color image for file size reduction."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (that format conversion of a color image for file size reduction) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. Applicant argues that the prior art fails to disclose; "whether the converted data is stored as compressed data for the file."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (whether the converted data is stored as compressed data for the file) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14. Applicant argues that the prior art fails to disclose; "that reduction of a color image is achieved by converting a color image to a color palette version."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (that reduction of **a color image is achieved by converting a color image to a color palette version**) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, the combination of Toda in view of Hill does disclose the amended claimed limitation including: converting a color image to a color palette version of the color image to generate the downgraded file (Page 1, [0007], lines 10 – 17, ... color palette generation means for generating at least one color palette as the representative color data ..., Toda).

15. Applicant argues that the prior art fails to disclose; "select the files to process with reference to file metadata being compared to a downgrade threshold."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (**select the files to process with reference to file metadata being compared to a downgrade threshold**) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

16. Applicant argues that the prior art fails to disclose; "the storage of the file downgraded by multiple downgrade operations in one type of storage while also storing the original file in another type of storage."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (the storage of the file downgraded by multiple downgrade operations in one type of storage while also storing the original file in another type of storage) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

17. Applicant argues that the prior art fails to disclose; "the type of memory from which the original image is retrieved."

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (the type of memory from which the original image is retrieved) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

18. Applicant argues that the prior art fails to disclose; storing "as a downgraded version of the original image".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (as a downgraded **version of the original image**) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

19. Applicant argues that the prior art fails to disclose; "the number of times that a file has been accessed for a particular time period".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (the number of times that a file has been accessed for a particular time period) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

20. Applicant argues that the prior art fails to disclose; "comparison of metadata to a file frequency threshold".

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose the amended limitation of: comparing file metadata to a file access frequency threshold (See 103 rejection of Claim 12 discussed in this Office Action above).

21. Applicant argues that the prior art fails to disclose; "a file access frequency threshold".

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose the amended limitation of: a file access frequency threshold (See 103 rejection of Claim 12 discussed in this Office Action above).

22. Applicant argues that the prior art fails to disclose; "that the threshold is indeed a file access frequency threshold".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (that the threshold is indeed a file access frequency threshold) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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23. Applicant argues that the prior art fails to disclose; "comparison of file metadata to a classification threshold".

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose: comparing file metadata to a classification threshold (Page 5, [0087] and [0089], lines 8 – 10 and 11 – 16; respectively, Toda). Wherein the step which binarizes a pixel to black or to white if the absolute value exceeds or not a threshold value corresponds to the step of comparing as claimed; and the threshold value corresponds to the classification threshold as claimed.

24. Applicant argues that the prior art fails to disclose; "a file data volume that stores file metadata corresponding to image files stored in a secondary storage for a host system".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (a file data volume that stores file metadata corresponding to image files stored in a secondary storage for a host system) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

25. Applicant argues that the prior art fails to disclose; "the actual image data that are stored within a file and which will be downgraded if the comparison of the file metadata it a threshold indicates it should be".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (**the actual image data** that are stored within a file and which will be downgraded if the comparison of the file metadata it a threshold indicates it should be) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

26. Applicant argues that the prior art fails to disclose; "the use of such conversion for image file downgrading and the storage of a file so downgraded in secondary storage".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (**the use of such conversion** for image file downgrading and the storage of a file so downgraded in secondary storage) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

27. Applicant argues that the prior art fails to disclose; "resolution reduction being used to compress a file that is stored in secondary storage while the original file is stored in tertiary storage".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (resolution reduction **being used to compress** a file

that is stored in secondary storage while **the original file** is stored in tertiary storage) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

28. Applicant argues that the prior art fails to disclose; "generate a downgraded file that is stored in secondary storage".

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose the amended limitation: generate a downgraded file that is stored in secondary storage (See 103 rejection of Claim 1 – 20 as discussed in this Office Action above).

29. Applicant argues that the prior art fails to disclose; "the lossy compression of an image file that is selected after a comparison of file metadata for the file to a downgrade threshold".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (the lossy compression of an image file that is selected after a comparison of file metadata for the file to a downgrade threshold) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

30. Applicant argues that the prior art fails to disclose; "the comparison of file metadata to any type of threshold".

Examiner respectfully disagrees. It is noted that the specific wording of the feature upon which applicant relies (the comparison of file metadata to **any type of threshold**) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

31. Applicant argues that the prior art fails to disclose; "a memory management technique", or "file metadata identified".

Examiner respectfully disagrees. It is noted that the feature upon which applicant relies ("a memory management technique", or "file metadata identified") is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 551

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(CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

32. Applicant argues that the prior art fails to disclose; “comparison of file metadata to a last access time threshold”.

Examiner respectfully disagrees. The combination of Toda in view of Hill does disclose: comparing file metadata to a last access time threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Fig. 2c, Col. 10, lines 27 – 31, Hill).

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Prior Art Made Of Record

1. Toda et al. (US Patent No. 2002/0037100 A1, filed: August 20, 2001) discloses image processing apparatus and method.
2. Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993) discloses a raster image lossless compression and decompression with dynamic color lookup and two dimensional area encoding.
3. Bryniarski et al. (US Patent No. 5,974,182, issued: October 26, 1999) discloses a photographic image compression method and system.
4. Sitka (US Patent No. 6,330,572 B1, issued: December 11, 2001) discloses a hierarchical data storage management.
5. Hill (US Patent No. 7,020,658 B1, filed June 4, 2001).

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Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
November 25, 2006


Sana AL-Hashem